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| 10/586,031  | 09/05/2008  | Hongzhuan Zheng      | 15098.0008USWO      | 1756             |
| 23552 7590 06/24/2011<br>MERCHANT & GOULD PC<br>P.O. BOX 2903<br>MINNEAPOLIS, MN 55402-0903 |             |                      |                     |                  |
| EXAMINER  |             |                      |                     |                  |
| LIU, HENRY Y  |             |                      |                     |                  |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary****Application No.**

10/586,031

**Applicant(s)**

ZHENG ET AL.

**Examiner**

HENRY LIU

**Art Unit**

3654

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 9/5/2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-912)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 9/25/2006
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

This is the first action on the merits for application 10/586031. Claims 1-11 are currently pending in this application.

#### ***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

#### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the -sectional shape of said main body is of squareness- in Claim 6 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering

of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: What structure is involved such that *-lubricating oil from the lubricating oil entrance channel only can enter from the inlet in the main body and flow out from the extending portion through the main body-*.

Claim 1 recites the limitation "the lubricating oil entrance channel" in line 5 of the claim. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 3, 4, 7, 8, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by RENZ (3,503,469).

Regarding Claim 1, RENZ teaches a lubricating oil balance equipment installed in a lubricating oil channel of a shaft, characterized in that it includes a ring main body (2) and an extending portion (4), the extending portion (4) extends outward from the main body (2) along axis direction, there is an inlet (end of inside of 3) in the main body (2) and the extending portion is ended in an outlet (5), so that lubricating oil from the lubricating oil entrance channel only can enter from the inlet (end of inside of 3) of the main body and flow out from the extending portion (4) through the main body (2). The extending portion extends along the axis direction since it has a thickness in the axis direction.

Regarding Claim 2, RENZ teaches a wherein the lubricating oil balance equipment is a single component (Fig. 1 and 2).

Regarding Claim 3, RENZ teaches wherein said lubricating oil balance equipment is a guiding cavity processed in an end of the shaft (Fig. 1 and 2).

Regarding Claim 4, RENZ teaches wherein said main body (2) is ring-shaped (Fig. 1 and 2). The main body is a tube and is thus also a circular band which fits the definition of ring shaped.

Regarding Claim 7, RENZ teaches wherein said extending portion extends outward along axis direction from the position adjacent to the circle.

Regarding Claim 8, RENZ teaches herein the shaft comprises an entrance channel (inside of 3) of lubricating oil, a middle channel (channel of 2 leading to 4) of lubricating oil and a discharge channel (4 leading to 5) of lubricating oil; lubricating oil can be supplied to components to be lubricated by entering from the entrance channel (inside of 3) of lubricating oil and passing through the middle channel (channel of 2 leading to 4) of lubricating oil and the discharge channel (4 leading to 5) of lubricating oil; the inlet of said lubricating oil balance equipment is connected to the entrance channel (inside of 3) of lubricating oil, the outlet (5) of said lubricating oil balance equipment is connected to the middle channel (channel of 2 leading to 4) of lubricating oil and the entrance channel (inside of 3) of lubricating oil and the middle channel (channel of 2 leading to 4) of lubricating oil are sealed off each other, so that the

lubricating oil can reach the middle channel (channel of 2 leading to 4) of lubricating oil only through the lubricating oil balance equipment.

Regarding Claim 9, RENZ teaches wherein the height of the discharge channel of lubricating oil is not higher than that of the middle channel of lubricating oil while the middle channel of lubricating oil is in the highest position (Fig. 1 and 2). There is no frame of reference to determine what the highest position is. If the shaft in RENZ is turned vertical, then the middle channel is at the highest position.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over RENZ (3,503,469) in view of SATO (5,921,349).

Regarding Claim 5, RENZ does not teach a sectional shape of said main body is a circle (Fig. 1 and 2).

SATO teaches a sectional shape of said main body (29) is a circle. If the section is taken in a plane perpendicular to the shaft cylindrical axis, then the sectional shape is a circle.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the main body in RENZ with the shape in SATO so the main body is easily manufactured.

Regarding Claim 6, RENZ does not teach wherein sectional shape of said main body is of squareness.

SATO teaches wherein sectional shape of said main body (29) is of squareness. If the section is taken in a plane which contains the shaft cylindrical axis, then the sectional shape is squareness.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the main body in RENZ with the shape in SATO so the main body is easily manufactured.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over RENZ (3,503,469) in view of GIELES (2004/0259671)

Regarding Claim 10, RENZ teaches wherein the external diameter of the extending portion of said lubricating oil balance equipment is same as the internal



diameter of the middle channel of lubricating oil so as to airproof the middle channel of lubricating oil.

GIELES teaches an external diameter of the extending portion (horizontal portion of 22) (Fig. 1) of said lubricating oil balance equipment is same as the internal diameter of the middle channel (vertical portion of 22) (Fig. 1) of lubricating oil so as to airproof the middle channel of lubricating oil.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the main body in RENZ with the same diameters as in GIELES so the main body is easily manufactured.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over HATCH (4,792,099) in view of RENZ (3,503,469).

Regarding Claim 11, HATCH teaches a mill having a lubricating oil balance equipment.

RENZ teaches the balance equipment of Claim 1.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mill in HATCH with the lubricating oil balance equipment in REMZ so the main body is easily manufactured.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HENRY LIU whose telephone number is (571)270-7018. The examiner can normally be reached on Mon-Thurs 7:30am - 5:00pm ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MICHAEL MANSEN can be reached on (571)272-6608. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael R Mansen/  
Supervisory Patent Examiner, Art Unit 3654

/H. L./  
Examiner, Art Unit 3654